

R E M A R K S

Claims 1 to 4, 6, 7, 9 to 12 and 14 to 18 as presented with applicants' paper dated December 18, 2007, are currently pending.

The Examiner indicated that Claim 6 was allowable, and that Claims 3, 9 and 14 would be allowable if rewritten in independent form.

As concerns Claims 1, 2, 4, 7, 10 to 12 and 15 to 18, however, the Examiner reiterated the position that the claimed subject matter was unpatentable under the provisions of 35 U.S.C. §103(a) in light of the teaching of *Motojima et al.* (US 4,866,201). In particular, the Examiner argued: "*Motojiuma [sic] et al teaches a method of applying to orchards (fruit trees) a composition comprising instant compounds of formula I. See abstract, column 20 lines 50-63. .... Note that orchards are fruit trees. Also note the step of applying the compound of formula I to the fruit tree in the claim is also carried out by Motojiuma [sic] which makes it obvious that the flavonoids and other phenolic compounds would increase in the orchards of Motojiuma [sic].*"<sup>1)</sup>

Applicants' respectfully disagree with the Examiner's position that "orchards are fruit trees." An orchard is an area of intentionally planted trees or shrubs maintained for food production.<sup>2)</sup> The trees or shrubs may be planted closely together as, e.g., illustrated by the depiction of a lemon orchard in Israel set forth in the enclosed copy, or the trees or shrubs may be planted spaced apart as, e.g., shown for the apple and cherry orchards depicted in the enclosed copy. As such, an orchard may comprise fruit trees, but does not consist of fruit trees.

The depicted orchards in the enclosed printout also illustrate that orchards may or may not comprise areas of undergrowth grasses. E.g., if the trees or shrubs are planted in an orchard in an open spaced fashion, i.e., sufficiently far apart from one another, undergrowth of grasses may develop. In the illustrated lemon orchard, however, the cover which is provided by the lemon plants would appear to be by far too dense to allow such development. In contrast thereto, the spacing of the trees in the illustrated apple orchard and the cherry orchard is such that undergrowth may develop.

1) Final Office action page 2, lines 14 to 21.

2) Cf., e.g., printout of "<http://en.wikipedia.org/wiki/Orchard>;" copy enclosed.

The reference inter alia states:<sup>3)</sup> "The compound of the invention which exhibits the above-mentioned plant-growth regulating effects are very useful not only for agricultural and horticultural treatment but also for control of plant growth in non-crop lands. For instance, when the compound of this invention is applied onto lawns in park, playing field, golf link, airport or embankment or undergrowth grasses in orchard or pasture land, it is possible to inhibit the over-luxuriant growth, to reduce the number of reaping and/or to facilitate the mowing operations as usually required for maintenance. Further, application of the new compound of this invention onto swards can promote side-shooting and increase the planting density of swards."

It is deemed to be immediately apparent from the statements made by *Motojima et al.* that the referenced compounds are to be applied specifically to non-crop areas, such as the mentioned undergrowth grasses in orchards. As such, the authors refer to orchards where a distinction between crops and non-crop areas is possible. As illustrated in the depictions of the apple and cherry orchards, the spacing of the apple and cherry trees not only allows a distinction between the crop area and a non-crop area, it also clearly allows for a selective treatment of the "non-crop area" in which the undergrowth grasses may develop. Bearing in mind that *Motojima et al.*'s remarks specifically pertain to the application of the compounds in question to non-crop areas such as undergrowth grasses in orchards, the Examiner's allegation that "the step of applying the compound of formula I to the fruit tree in the claim is also carried out by *Motojiu-ma [sic]*" is deemed to be clearly in error.

The express, implicit, and inherent disclosures of a prior art reference may be relied upon in the rejection of claims under 35 U.S.C. 102 or 103. "The inherent teaching of a prior art reference, a question of fact, arises both in the context of anticipation and obviousness."<sup>4)</sup> Also, there is no requirement that a person of ordinary skill in the art would have recognized the inherent disclosure at the time of invention. It is, however, required that the subject matter is in fact inherent in the prior art reference.<sup>5)</sup> The fact that

3) Cf. col. 20, indicated lines 50 to 63, of *US 4,866,201*; emphasis added.

4) *In re Napier*, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995). See also *In re Grasselli*, 713 F.2d 731, 739, 218 USPQ 769, 775 (Fed. Cir. 1983).

5) *Schering Corp. v. Geneva Pharm. Inc.*, 339 F.3d 1373, 1377, 67 USPQ2d 1664, 1668 (Fed. Cir. 2003).

a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic.<sup>6)</sup> "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'"<sup>7)</sup>

The treatment of undergrowth grasses in an orchard cannot be deemed to necessarily entail a treatment of the trees or shrubs which are grown in the orchard, and the statements made by *Motojima et al.*, therefore, cannot be deemed to inherently describe a method in which, e.g., a citrus plant is treated with an acylcyclohexanedione of applicants' formula I thereby giving the plant an increased and qualitatively modified content of flavonoids and phenolic constituents compared to an untreated plant, as set forth in applicants' independent Claims 1 and 10. Correspondingly, the method of treating non-crop lands of, inter alia, orchards which is mentioned by *Motojima et al.* cannot be deemed to inherently result in a plant or plant part which falls within the realm of the plant or plant parts referenced in applicants' independent Claim 7.

Since orchards are not fruit trees, and the step of applying applicants' compound of formula (I) to a fruit tree is not inherently carried out in accordance with the teaching of *Motojima et al.*, the reference cannot be deemed to render applicants' invention as defined in independent Claims 1, 7 and 10 *prima facie* obvious within the meaning of Section 103(a). Moreover, Claims 2, 4, 11 to 12 and 15 to 18 depend, either directly or indirectly, upon Claim 1, 7 or 10, and if an independent claim is non-obvious under 35 U.S.C. §103, then any claim depending therefrom is non-obvious.<sup>8)</sup>

Therefore, and for the reasons already presented in applicants' paper of December 18, 2007,<sup>9)</sup> it is respectfully requested that the rejection of Claims 1, 2, 4, 7, 10 to 12 and 15 to 18 under Section 103(a) be withdrawn. Favorable action is respectfully solicited.

6) *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).

7) *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted).

8) *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

9) The respective arguments are herewith incorporated by reference.

# Orchard

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An **orchard** is an intentional planting of trees or shrubs maintained for food production. Most orchards comprise either fruit or nut-producing trees (see fruit trees), for commercial production. Orchards are also sometimes a feature of large gardens, where they serve an aesthetic as well as a productive purpose.<sup>[1]</sup>

Most temperate-zone orchards are laid out in a regular grid, with a grazed or mown grass or bare soil base that makes maintenance and fruit gathering easy.

Orchards are often concentrated near bodies of water, where climatic extremes are moderated and blossom time is retarded until frost danger is past.

The forest garden is a food production system that is closely related to the orchard. A move towards more ecologically-friendly coffee production has led to forest-garden production of coffee. Brazil Nuts and rubber are being produced in such a method in some areas.

Often, mixed orchards are planted. In Europe Quince is sometimes planted along with apples.

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## Streuobstwiesen

See also the "de:Streuobstwiese", a traditional landscape in the temperate, maritime climate of continental Western Europe. While Streuobstwiesen were kind of a rural community orchard in the 19th and early 20th century, originally meant for productive use of stone fruit, ecologists successfully propagated to have indirect state subsidizing for valuable Habitats and Biodiversity and beautiful landscapes. Even old conventional orchards provide a suitable habitat for many animal species that live in cultural landscape. A notable example is the hoopoe that nests in tree hollows of old fruit trees and is threatened in many parts of Europe because of the destruction of old orchards (in absence of other suitable nesting sites).<sup>[2]</sup>

## Crops

Tropical areas

- Banana
- Cacao
- Coconut
- Coffee
- Durian
- Guava
- Mango
- Papaya
- Rambutan
- Tea



A lemon orchard in the Upper Galilee of Israel.



A community apple orchard originally planted for productive use during the 1920's, in Westcliff on Sea (Essex, England)



Streuobstwiese, a rural community orchard, traditionally for productive use. Today endorsed for its quality of habitat and biodiversity



Sour cherry orchard on Lake Erie shoreline (Leamington, Ontario)

#### Subtropical areas

- Citrus (Grapefruit, Lemon, Mandarin, Orange, etc.)
- Date Palm
- Lychee

#### Temperate areas

- Apple
- Apricots
- Bayberry
- Blackberry
- Blueberry
- Cherry
- Chestnut
- Cranberry
- Governor 's plum
- Hazel
- Jingko
- Peach
- Pear
- Pecan
- Walnut
- Plum
- Persimmon
- Raspberry
- Sandpear



A persimmon orchard in northern Kansai region, Japan

## Orchards by region

The most extensive orchards in the United States are apple and orange orchards, although citrus orchards are more commonly called groves. The most extensive apple orchard area is in eastern Washington state, while there are extensive orange orchards in Florida and southern California. A particular advantage of growing apples on the high plateau areas of Washington state is that it is possible to grow high-quality organic apples. In eastern North America many orchards are along the shores of Lake Michigan, Lake Erie, and Lake Ontario.

Murcia is a major orchard area in Europe, with citrus crops. New Zealand, China, Argentina, and Chile also have extensive apple orchards.

## Towns associated with Orchards

Tenbury Wells in Worcestershire has been called *The Town in the Orchard* since the 19th century because it was surrounded by extensive orchards. Today this heritage is celebrated through an annual Applefest - see <http://www.applefest.org.uk>

## Airports associated with Orchards

- ORD
- Orchard Field

## Historical Orchards

- Orchard House in Concord, Massachusetts the residence of American celebrated writer Louisa May Alcott

## See also

- Berries
- Citrus
- Forest garden
- Fruit

- Fruit trees
- Fruit tree forms
- Fruit tree pollination
- Fruit tree propagation
- Pruning fruit trees
- Drupe

## References

- ↑ Luther Burbank. *Practical Orchard Plans and Methods: How to Begin and Carry on the Work*. The Minerva Group. ISBN 1414701411.
- ↑ Berhens M. *Why hoopoes won't trade*. A Pro Natura Publication on the Global Economy and Nature. Pro Natura, Switzerland.

## External links

- Home Orchard Society
- North American Fruit Explorers
- Orchards pathway on England In Particular
- Pennsylvania tree fruit production guide; a guide on how to set up an orchard in practice

Retrieved from "<http://en.wikipedia.org/wiki/Orchard>"

Categories: Agricultural establishments | Horticulture | Gardening

**Hidden category: Articles to be merged since January 2008**

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